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THE

English Academy:

A

DRAWINGBOOK

Containing Variety of

EXAMPLES

OF THE

External Parts of Men, Women, and Childrens Bodies; With the Shapes of several Creatures frequently used amongst *Heralds, Gold-smiths, &c.*

LIKEWISE

The ARTS of Drawing, Etching, Engraving in Copper and Wood, Painting and Limning: All being carefully Performed.

WHEREIN

The aforesaid ARTS are Exemplified, with Plain and Easie Directions to Guide you to their Attainment, with much Delight. Also the Real Method how to Wash or Colour GLOBES, MAPS, PICTURES, LANDSKIPS, FLOWERS, FRUITS, BIRDS, BEASTS, FISH and FOWL.

BODLEIAN LIBRARY OXFORD

A WORK

Worthy Acceptation of all those that are Friends to ARTS,

Drawers, Embroiderers, Stone-Cutters, Carvers, Goldsmiths, Needle-Workers, Gum-Workers, &c.

Performed according to the Order of the First and most Eminent Masters of Proportion, *VIZ.*

P. L. H. G. P. R. H. B.

LONDON,

Printed by *E. Lloyd* for *D. Page*, at the *Anchor* and *Marriner* on *Fish-street-Hill* near *London-Bridge*, who buyeth all sorts of Old-Books, and maketh the best Ink for Records. 1672.

TO THE

Ingenuous Lovers

OF

ART.

Courteous Reader,

AMONGST the Variety of Books of this Nature, here is One puts in for a ſhare. Its in a plain Garb, without that Enrichment that ſome are Adorned with; I mean, that laborious ſhadowing that beclouds the eyes of Young Practitioners, for whoſe Uſe chiefly this Piece is intended: It is in another kinde of Coloured Coat then all its former Brethren; not Clothed in Black, but in Red, for the convenient Uſe following. Thoſe that may deſire to attain the Art of Proportion, at the firſt ſight look upon the imitation of theſe firſt Rules to be ſo hard a task, that it oft falls out they rather deſiſt then adventure: Such therefore I Adviſe to go over each particular Part, in each Leaf, ſeveral times with a dry Pen, until the Idea *of the Part they go over falls in with their Fancie, which when they do apprehend, then let them with a Pen and black Ink, go carefully over that part they ſo conceived in its Proportion; This way for a Learners Encouragement at his firſt Attempt, will reduce his firſt diſheartning to a ſpeedy undertaking of a firſt ſeeming impoſſibility. And this I Adviſe, for the Parts in each Leaf, and for ſo many Leaves as may lead the Beginner to a capacity of Apprehenſion of Proportion. If Envie carp, and ſay,* This is a New Device: *'Tis ſoon Anſwered,* But 'tis a true one. *If the Artiſt ſhall ſay,* 'Tis an Erroneous Rule: *'Tis Replied,* It's only intended to lead to the knowledge of the true, and by that I mean the Eye and Hand, Imitation. Vale.

A Pen-knife, white Paper thick and ſmooth, Sallow-coals to be had of the Charcoal-men, Feathers of a Duck Wing, black or red Lead-Pencils; Pens made of a Ravens Quill, a neat Ruler, and a pair of Compaſſes.

Slit your Charcoals of Sallow-wood into ſlender Pieces, and then ſharpen them into the forme of a Pencil, the neateſt way of uſing them, is to put them into a large Quill or a braſs Pencil; This way you will avoid ſoyling, both your Fingers and the Paper on which you draw; the reaſon why you are firſt to draw with Charcoal is, becauſe it will with the leaſt touch of a Feather be taken out, as oft as you ſee convenient, untill the deſign you imitate pleaſe your Fancie.

After your Proportion is thus far touch'd out, then with black Lead, by degrees, go over thoſe faint Touches remaining of the Cole, and carefully endeavour the Amendment of thoſe firſt Touches, with diligence comparing your Imitation with your Copy, and it will the better confirm your judgement; if now you try by your Compaſs the Proportion of the whole, and alſo each particular Part therein contain'd, before you perfect your Deſign with Ink. for after Ink you can make no alteration.

My Advice to young Learners is, that they would follow open and viſible Figures, not cumbred with tedious Shadows, until in ſome meaſure they apprehend the real Parts of true Proportion, for all ingenuous Perſons, account that ill-ſpent time, to beſtow great pains in ſhadowing a lame Proportion, and is no leſs ridiculous then a large Knot fix'd to a lame Letter; for thoſe that intend Graving of Figures, or Etching with *Aqua fortis*, after they underſtand Proportion, it will be more advantageous to them to imitate open ſhadowed draughts, with the Method of the windings of the ſtroaks in that Piece they copy; for this will not only inure the hand, but likewiſe inform and confirm the Judgment, how to order proper ſhadows; but if the Practitioner deſign for Pointing then after Proportion is accompliſh'd, Bold and free Touches upon blew or fine grey Paper, with black chalk, heightned with Paſtills, of what colour you moſt fancie, is a moſt advantageous way of Practice. Some adviſe firſt to begin with Geometrical Figures; and then proceed to the Imitation of Fruits, Flowers and Plants; after that to Beaſts, Fowls and Fiſh.

And in the laſt place, to the parts of the Proportions contained in the Body of Man: I confeſs, this tedious task of going about may bring ſomething home at laſt: but if you grant, that the freeſt Fancie proves the beſt Artiſt, then why ſhould the Fancy be bound up, ſince there hath been rarely found an Artiſt that hath been excellent in Proportion in thoſe

THE ENGLISH ACADEMY: A DRAWING-BOOK:

Of the EYES, NOSE, MOUTH, CHIN and EARES.

IN which you will finde a *Medium* in the Size preſented to your View, in ſeven ſeveral uſeful Motiõns, after the Order of no mean Maſter in the truth of Proportion, performed with few Touches, and you may ſingle out at pleaſure, either *Eye*, *Noſe* or *Mouth*, if the whole together ſeem difficult; but the Printing in Red, as was formerly mentioned, is of excellent Uſe to bring in your Hand, and aſſiſt your Fancy in your firſt Attempt.

I have thus expreſs'd theſe parts of the Face, to inform you how Harmonious each part anſwers to the Motions in General, which way ſoever they turn: which if not firſt carefully view'd, and after that conceived of a poſſibility of truth in Imitation, your raſh Onſet will come to little: Go not from Leaf to Leaf, and from one part to another, until you have made a conſiderable progreſs by Imitation, and have great regard to the Face, whether young or old, fat or lean, grim or pleaſant, laughing or weeping: according to which all the parts muſt be anſwerable.

Of Heads and their Proportions.

I Have here in this Leaf given you a more perfect Face with few Touches, yet Truth of Proportion and Motion; And when you attempt their Imitation, be very curious and careful in touching our leisurely, Part by Part, observing whether the Face be elevated or dejected, wrinkled Age, or smooth-fac'd Youth, which are properly expres'd in this Leaf of Heads.

To Imitate which,

1. Touch very lightly if it be a side face, as in these, the outmost Circumference of the Head and Face, to direct you in the exact bigness.

2. Consider those principal Touches that give life and likeness.

3. In placing the Features, note the Parts must be equal, from the top of the Forehead to the Eye-brows, and from the Eye-brows to the bottom of the Nose; And from the bottom of the Nose to the bottom of the Chin are the Parts equal.

4. The Mouth Extended, and the Corners turning up, shews a smiling Countenance, a bending Eye-brow, and the Forehead and top of the Nose between the Eye-brows wrinkled, shews frowning.

5. The distance betwixt the Eyes, must be the length of one Eye in the full Face, but in a half or three quarters Face it is lesned by degrees.

6. Place the Nostrils underneath the Corners of the Eyes exactly.

7. Having touch'd out the Eyes, Nose and Mouth lightly, make them more perfect, then proceed to finish the Face; and then proceed, if a man, to perfect it with the Hair on the Head and Beard.

8. Observe exactly the principal Curles and Deepnings in the Hair, so shall the Order of the lesser Curls fall in with Ease, still having regard to the Imitation of your Pattern

Of Heads and their Proportions.

YOU have here another Leaf of Heads considerably different from the former, and no less exact; wherein the Method is continued with small pains and proper Touches, according to their several Representations, whether spritely Youth, or serious Age.

The lovely Conntenance is expres'd without any clouded brows, wrinkled forehead, with ample height and bredth; Also a Majestick Grace, a full Eye, a sweet shadow at the bottom of the Eye-lid, and little at the Corner; a Nose proportionable, not too wide Nostrils; a clear Cheek tenderly shadow'd, a smiling Mouth, a thin upper Lip, the Mouth-line shadow'd at the Corners.

The fearful Countenance is expres'd with hollow Eyes, looking heavy and downward, fallen, thin Cheeks, close Mouth, with careless staring Hair about the Ears.

The Envious Countenance is expres'd with hanging Cheeks, pale Countenance, and Grinning Teeth.

Of Heads of several Creatures for Imitation.

THESE Varieties are no less useful then the former, for the Exercise of the Eye and Hand, done with as little pains, and yet to our intended Purpose,

The Cruel Savage Bear.

The strong Elephant.

The wanton Goat.

The furious Lion.

The tender Hinde.

The Swinish Bore.

The Antick Ape.

The stout Horse and the Cow.

Each of which, though of various Shapes, yet with a few Touches expressing their natural and principal Features; Intended for the use of all such as have occasion for Coats of Armes, Crests, &c. In imitation of which, each particular Creature requires no less care and observation then the foregoing Heads, which with care, observation and deliberation, are to be first lightly touch'd out, their Proportions measur'd, and their distinct differences accordingly performed.

Of HANDS.

THE Variety of Postures and Actions of the Hands are more various then the opinions of Masters concerning their Proportions; some say, the Hand is the length of the Face; others, that it is three times the length of the Nose, against which there are Exceptions; some that hath a long Face and Nose, hath but a short Hand: and others have a short Face and a long Hand: but to the drawing of Hand there goes in the opinion of most no less curious Observation then is required in a Face: its true Proportion with the Fingers, Joynts, Veins, with its bending of the Joynts, the Wrist-bone, the small swellings and bendings of the Fingers, also the Nails and Knuckles.

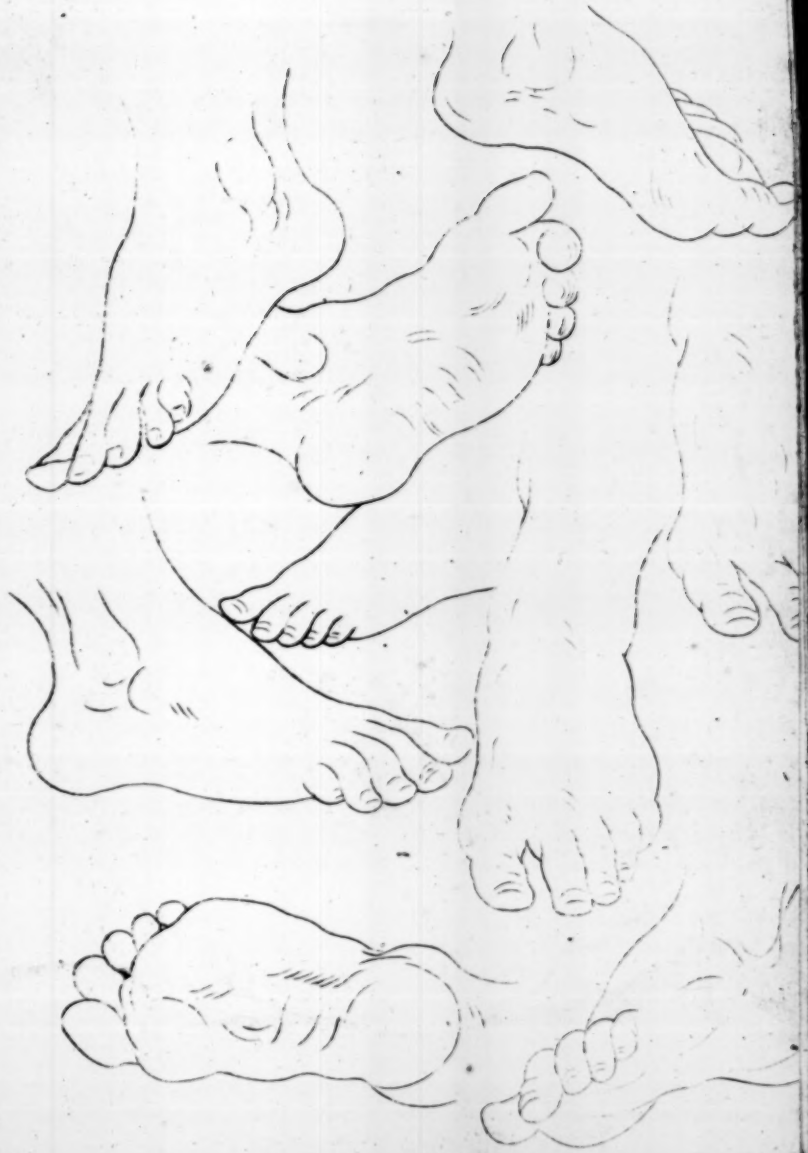
The Hand by Touches of the Muscles discovers Age, answerable to the faces Discovery in its place.

The Plump and fleshie, Youth and Courage: The Nail upon the last Joynt of the Finger, and takes about half that Joynt.

Observe carefully these several Proportions, whether backward or forward, and pass not them by until your Judgment convince you, that the Hand and Face are the choice Distinguishers of an able and experienc'd Artist.

Of Feet and their Proportions.

CONcerning these Nine Varieties of Feet, what hath been said of Hands is not impertinent for the Observation of Feet, also especially Considering our Modern habits, they seldom appearing uncovered as the Hands usually do. Neither think I it proper to Lead you into that Labyrinth and dubious story, about Geometricall and Diagonal Lines to form out Proportions, a Practice more fit for an able *Mathematician*, or *Geometrician*, than a Young undertaker for some particular uses, the formes themselves are obvious to each Eye, and so I leave it to your serious Imitation: advising you to observe all their Motions and Windings, whether standing, running or fallen, with their swellings of Ancles or Joynts, and their due Proportions.



Of Armes and Hands joyn'd.

THESE more Compleat Parts of the Body, are a Preparatory to our farther design; which is to lead you on gradually to a higher perfection in truth of Proportion, wherein your serious Observation of each postures, Action and Motion is required, as if fix'd to the Trunk of the Body, without which you will never joyn these Parts properly to the whole: and although there appear little of shadow in each part, yet the grand Touches that fall in the Bend or Motion of the Arm directs the true carriage of shadows, in all such Postures, Gestures and Actions.

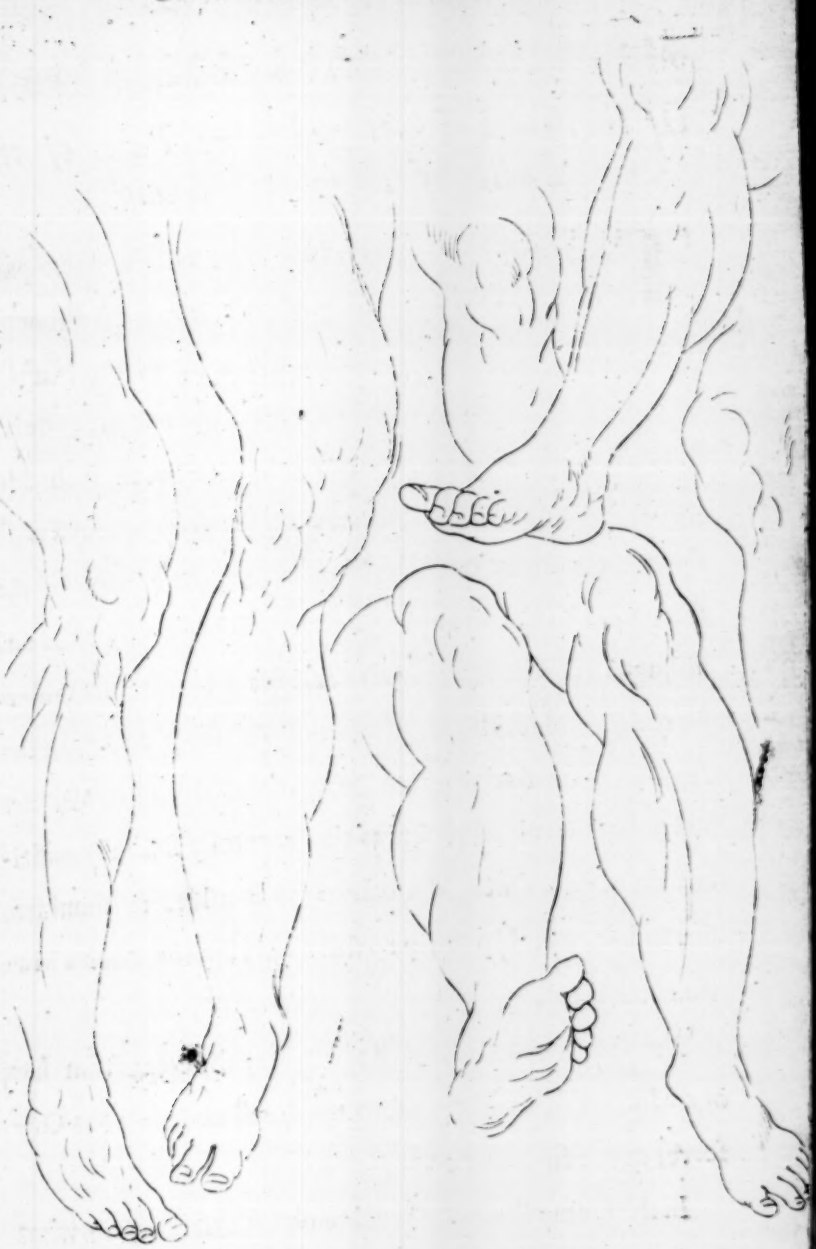
There is, and you will finde it so, a vast difference betwixt the natural ComposedMotion, and the enrag'd or forc'd Motion.

Let not the Armes length contain any inequality the one part to another; but with care and deliberation touch'd out each part: for the pitch of the shoulder to the Arms bending, and from that part to the Wrist, and accordingly with as great a care affix the hand.

Of Thighes, Legs and Feet; their Proportions.

THESE formes of Proportion are the laſt Part of the Parts of Proportion: our next will be to the Trunks of Bodies: What our Advice was concerning Armes and Hands is not to be forgot in theſe Parts, from the Groyn, the Thigh to the Knee bears a differenr thicknes, falling leſs and leſs: and the Muſcles about the Knee have curious Obſervations, and ſeldom well expreſs'd: from the Knee the ſwelling out as well as the falling in of the calf of the Leg, requires as exact Obſervation: And from the Ancle, the Foot, to the end of the Toes no leſs, if Harmoniouſly compleated.

If in all theſe parts of Proportions you run from part to part, before you underſtand what you are about: when you come to the Trunks of Bodies, and Bodies more compleat: then your erroneous performance will convince you of that neglect you all along ſo much ſlighted: And as ſure as he that will write words before he can ſhape Letters is ridiculous, ſo no leſs guilty is he that attempts at whole Bodies before he underſtand the parts.

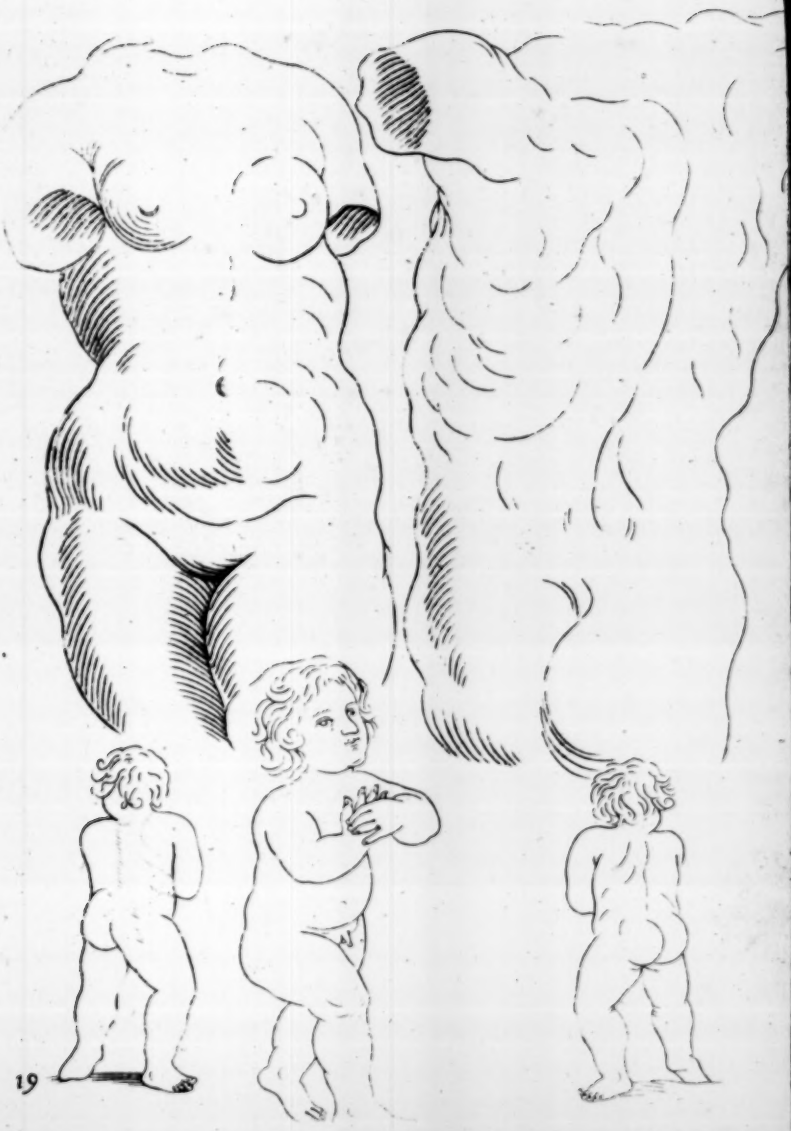


Of the Back-Parts and Fore-Parts of the Bodies of Man and Woman.

THE Trunk of Mans Body ſeen on the back-part from the ſhoulder to the Buttocks is expreſs'd, though with few Touches in his natural Poſtures, as the Muſcles properly fall: to imitate which, let it appear, that your labour in all the former parts was managed with ſuch diligence, that now in the cloſe your Progreſs expreſſes ſo much: the Touches of the Muſcles, and the Motion of the Body muſt be anſwerable, you will finde ſwellings out and fallings in of the body require curious and careful Obſerſervation: Note the Shoulders bredth, from thence to the Arm-pits, and ſo down: and let all Parallel-veins, Muſcles and Joynts be plac'd proper as they naturally fall in oppoſition, the one anſwering the other: as ſhoulder to ſhoulder, ſide to ſide, and hip to hip: ſtill obſerving the Bodies Motion and Winding.

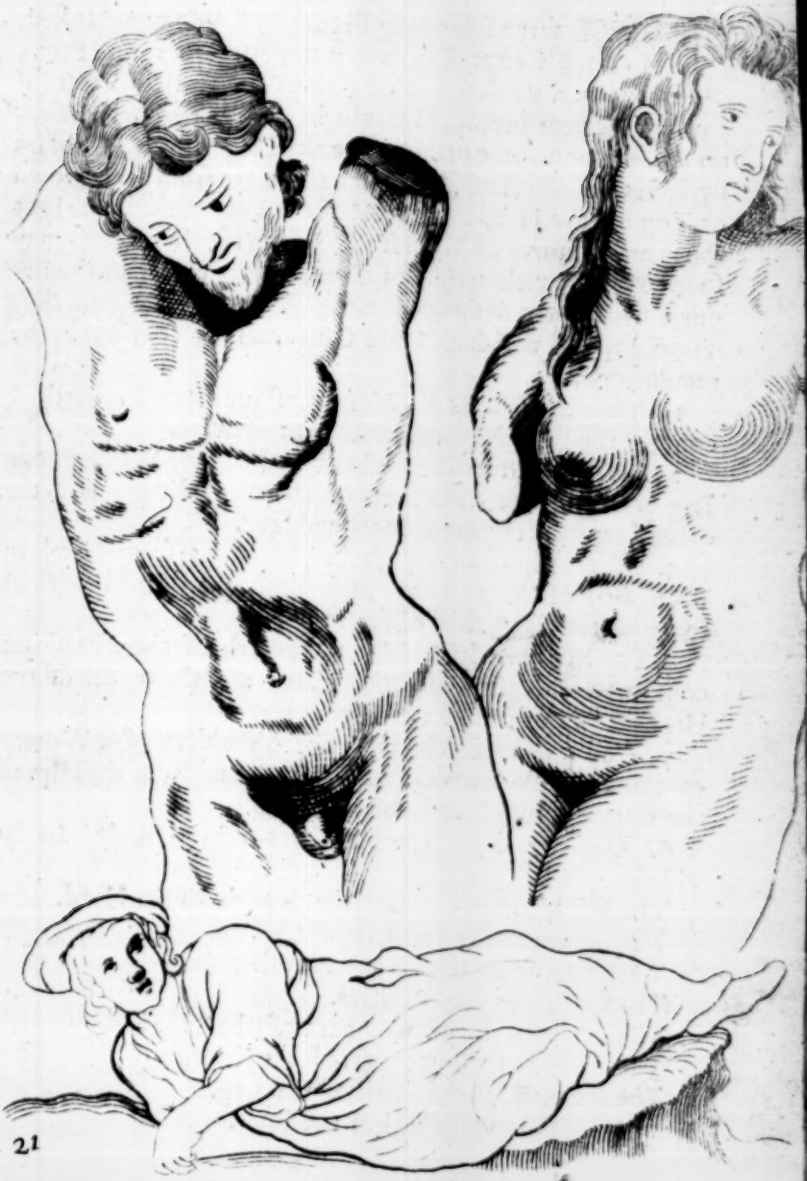
The Trunk of a Womans Body is very different from that of a Man, which will appear to the eye of an Ingenious Obſerver at the firſt Glance.

In the plump Roundneſs, and tender Pleaſantneſs in what ſhadows are requiſite for that Sex.



Of Heads and Trunks of the Body of Man and Woman joyn'd; both seen forward.

IN these Figures the Heads joyn'd to the Bodies come to the neareſt of our laſt Intention, which is Perfection and Proportion in the compleat Bodies of Man and Woman; The difference is great in the Obſervation of their fore-parts, as the Proportion themſelves beſt diſcover: The fore-part of Mans Body hath the like ſtrength of Muſcles anſwerable to the back-parts, as will appear in the Figure from the pitch of the Throat to the Privities, in his Breaſts, Sides and Belly, how unpleaſant to that of a Woman, whoſe beautiful Countenance, Clearneſs of Skin, Plumpneſs of Fleſh, Pleaſantneſs of Breaſts, and Roundneſs of Body, terms her, The Delight of Man for Pleaſure, Mirth and Solace.



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Of whole Figures Naked.

THESE three following Figures of Women Naked, so largely expres'd, are not perfected to the Feet; but our Varieties fore-going, are to that defect, if any, a sufficient supply, I might have given you, as *Albertus Durus*, and some others have the Proportions of Bodies by Lines thus divided, in which there are from the Crown or Top of the Head to the sole of the Foot contained eight Parts or Measures of the Head, which the Ingenuous may soon examine with a Pair of Compasses, either in the Figures themselves designed, or the Peece from which they do design, to which let these Observations continually be remembred.

1. That the Bodies of Women of ordinary Proportion, contain the same Measures with that of Man.

2. All Bodies standing, whether of Men or Women, one Leg generally bears the stress of the whole Body, and the other Leg standing more loose and free.

3. Note, that although the Measures from Head to Foot both of Man and Woman agree, yet in the bredth of some of the Parts they differ much.

4. For in the Body of Man the bredth of the Shoulders contain two Measures of the Head; and the bredth of the Hips two Measures of the Face.

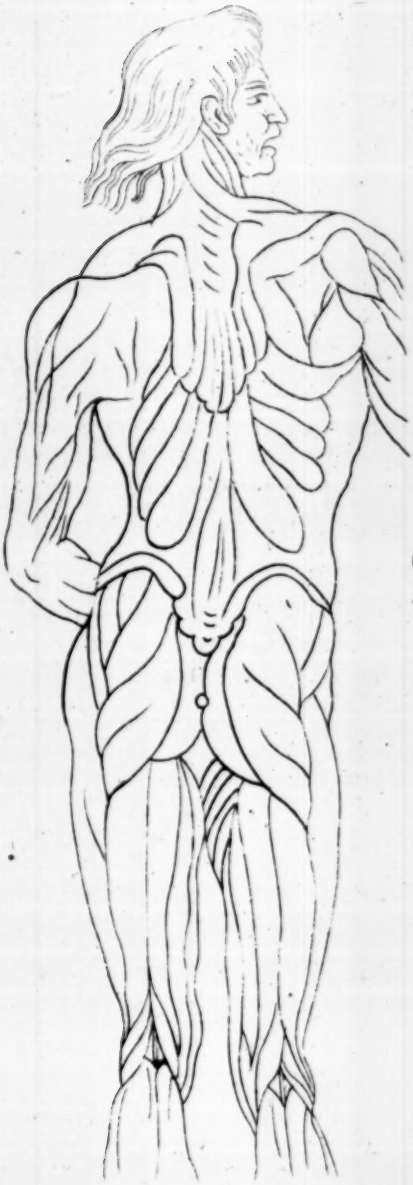
5. And the bredth between the Shoulders of a Woman contains but two lengths of the Face; and from the Hips to the Buttocks two lengths of the Head.

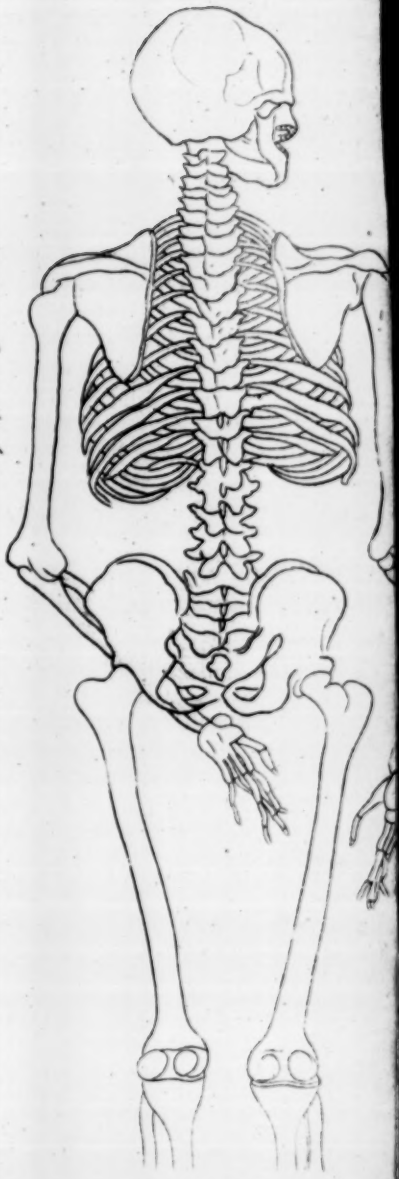
6. Observe how the Measures of the Body are divided.

The first Measure contains the length of the Head.
The second to the bottom of the Breast.
The third, from that to the Navil.
The fourth, to the Privities.
The fifth, to the brawny part of the Thigh.
The sixth, to the lower part of the Knee.
The seventh, to the small of the Leg.
The eighth, to the Heel of the Foot.

Of the Bodies of Anatomy, and the Body of a Skeleton; both ſtanding backward.

THESE two Figures are added for Variety, and require no leſs care in their Imitation then the other foregoing. In the Anatomy-Figure the ſeveral parts diſtinguiſhed lie viſible, from the Nape to the Throat, the Bone of knitting; the Back, Shoulder, Blade, Chine and Loynes; Shoulder-Blades, Ribs, Waſte, Reins, Buttocks, Thighes, Hams, Ancles, Legs, Feet and Sole; to imitate theſe as the reſt foregoing lightly touch'd out in the outward forme before you: Divide the inward parts, and be ſure to finiſh no one part, until you find every part placed in its true and proper place, in exact Proportion, which having done, then wiping out your groſs Touches of the Cole, leaving only dim Touches for your Direction; then with black Lead, eyeing your Pattern, amend what you finde amiſs at firſt; And after, with a Neat Pen go over all again, and this finiſhing part, be ſure that in it you be moſt exact.





The Art of Etching in Brass, Copper, Silver or Steel. Discovering what Instruments belong to that Art, and the way how to accomplish the same.

FIRST, How to make the Ground to shadow upon.

Take one ounce and an half of Virgins Wax, half an ounce of *Asphaltum*, half an ounce of the best *Mastick*; beat your *Asphalt* to powder; first, put your wax into a new clean Pipkin, and set it over a gentle fire, and when it is throughly melted, then put the *Asphalt* and *Mastick* into it, and let it be well mix'd altogether; then take a clean earthen Porringer near full of clean water, then pour your melted stuffe altogether into the water, only remember to leave the dregs behind; and when it is through cool'd in the water, then frame it up into a Ball; and when you are to use it, put it into a clean Lawn, or fine Holland Rag doubled; but let not the Rag have any holes in it, and Tye it up close for your use.

Your Copper being well polish'd, which is to be had ready prepar'd, before you lay on your Ground, Cole it over, and wipe not off the water, but set it slant that the water may drain off; and when you perceive it through dry, scrape some chalk very fine upon it, and then clear it over with a fine linnen Rag, and be sure that you touch not a finger upon the side of the plate clear'd, to avoid any greasiness, which is a great prejudice to the Work.

Then to lay on your Ground.

Put into a chaffing-dish or Fire-Pan, either some small Cole fire, or Embers, for Charcoal is too vehement a fire, and would quickly burn and dry the moisture out of your ground; but in laying your Plate upon the fire, let the fire have Air: then take your Ground in your Rag; and try if your plate will melt it; if so, then be quick in spreading it over the Copper, but lay it not too thick. Then take a Duck Feather, or a Raven, with that spread or wipe over the ground to make it very even, wiping it cross every way to lie even, and when it is so, set it to cool.

Then to work exactly, and perceive your strokes plain, cover over the aforesaid Ground with a white colour.

Thus, grinde a small quantity of white Lead, with a little Gum-water, and let it be of convenient mixture to spread; then take a large Pencil as big as a Wallnut or more; but let it be of fine hair, with which take off that Colour, and wipe over your Plate cross-ways to lay it even; after you see it even, then take a brush made of Squirrils Tails, and with that you may more curiously lay your white colour even.

Then

Then having Needles of several Sizes in readiness well prepared, by whetting them upon an Oyl-stone, which to keep their Points round, you must let them run round betwixt your Fingers as the Turners run; being thus prepared, and your Draught or Design as ready, you are to consider which way your Draught is to stand, when 'tis printed, and accordingly to place it upon your Plate, preparing your Draught with Red Lead, and fine all-coal dust rub'd over upon the back-side of your draught, and so fixing it to the Plate, with a blunt Needle for that purpose, trace over all the out lines of your draught also, touching out the folds or shadows, what distances, and how far dark or light.

Before you attempt to shadow draw over all your out-strokes, as aforesaid, lest otherwise you lose that first mark of your tracing over which will soon be lost and rub'd out.

Let your Needles with which you work be put into sticks or Pencils the length of a Common Pen; and at the other end from the Needle, let there be a blunt Pencil to wipe off the Grounds that flies up before your Hand-working.

In your Working, Lean not hard upon your Pencil, but only to touch through the Ground to the Copper; when you leave work, wrap up your Plate in Papers; and if in Winter, in a Woollen Cloth, to keep your Ground from scratches in the one, and from freezing in the other.

When you have finish'd all your Work fit to eat with *Aqua fortis*, first melt some green wax, and with an old Pencil lay it round upon the Edges of your Plate, to make your green Wall of Wax round your Plate, to keep your *Aqua fortis* upon it to eat; and this Wax must be wrought into long Pieces, the thickness of a common Paste-board, and half as broad as a Knife, and so fix'd round upon the aforesaid melted Wax; and with a little stick, broad at the end, sharp-edged, thrust down the Wax to make it stick; when you put on the *Aqua fortis*, if it be good, to a third part of that which was never used, mix it at least with two parts to one of that which hath been used, if you intend your Work to be fine.

Or in case of want of that, you may mix Wine-Vineger with your *Aqua fortis*.

But if your Work is to be course, you may use a third part of the *Aqua fortis* entire.

Only consider the difference betwixt double and single *Aqua fortis*.

Lastly, for what Parts you would have eaten sweet, first pour off your *Aqua fortis* into a dish, then wash your Plate over with clear water; let dry, and then melt some Candle-grease with the dregs of your Ground before melted, and with a Pencil cover those Places you would have

Thus much of Etching.

Of

Of the Art of Graving, the Inſtruments to be made uſe of, and how to emprove them, whether upon Braſs, Copper, Steel *or* Pewter.

TO practiſe this Art, Gravers are to be provided according to the Work you intend to practiſe; If for the Goldſmiths occaſions of Armes and Letters in what they call *Flat-ſtitch*, ſeveral crooked Gravers; If for to engrave Maps, Portraitures, Frontiſpieces, and the like, ſtrait Gravers are the moſt commodious; To which adde an Oyl-ſtone, a Cuſhion, a Burniſher and a Drawing-point.

The Oyl-ſtone is to be of a Grit, neither too fine nor too courſe; they are oft ſold in *Fetter*-lane; where the ſeveral ſorts of Gravers and Hafts alſo are ſold: Before you attempt to whet your Gravers, conſider what work you intend them for, and according to that prepare them, the Square point, and the Diamond-point are the chief for uſe.

In whetting your Graver keep the edge firm upon the ſtone, on which you intend to fix the point, and be ſure to carry an even ſteddy hand, placing both the fore-finger firmly upon the oppoſite ſide of the Graver, reſting your Haft-end againſt the Palm of the right hand, whetting both the ſides alike.

Then ſetting the end of the Graver ſloping upon the Stone, held firm againſt the Palm of the Hand; whet the Point very flat in form of a Diamond: Having thus prepared your Graver, having a Leather-bag fill'd with ſand to lay your Plate on, hold your Plate with your left hand, ſo that with freedom you may turn it according to the Motion of either ſhadows or Letters you engrave

If your Graver be too hard at firſt, you may abate it by holding it to the flame of a Candle, until you do perceive it to turn yellowiſh, or a ſtraw colour, then thruſt it into the Tallow, in which quench it; but in conſtant uſing in a little time it will become more uſeful by whetting, which is beſt. That the Haft of the Graver may not prejudice you, cut off the part of the knob of the Handle that lies upon the ſame line with the Edge of the Graver; otherwiſe, eſpecially in a large Plate you will not be able to move it upon the Copper, but it will both ſtop you in your ſtroke, and cauſe your Graver to run irregular.

And be ſure that your Fingers interpoſe not between the Plate and the Graver, for that will be of the like prejudice as the Haft.

He that inures not his Hand to ſuch a Command, that with one and the like eaſe, he can both begin and end a ſtroke, is to learn a chief part.

To imitate any Pattern, if to print forward you muſt reverſe it backward upon the Copper thus; your Plate being clear poliſh'd, heat it over

over the fire; And when it is hot, take Bees Wax, put in a fine Rag; and rub the Plate over with it, until you perceive the Wax to lie even all over your Plate, both thin and even: you may for a more certainty lightly wipe it over with a Pidgeon or Duck-Feather to lay it even; then after it is cool'd, if your Print be not of too old a ſtanding, you may rub it off upon the Wax with an Ivory Haſt of a Knife by degrees, and it will leave a perfect Impreſſion; But if it be very old, then to ſupply that defect either with black lead, or *Franckfort*-black, mix'd with clear water, the thickneſs of common Ink, and therewith go over all the chief Parts or Proportions you do intend to imitate, and that Impreſſion will remain upon the Wax, which with a drawing Point you muſt trace over upon the Copper, before you attempt to grave, leſt you rub out or loſe your Proportion.

But if you are to imitate a Piece, as it ſtands in your Pattern, to be grav'd upon wax; you may trace it through the Pattern, but it will plaineſt appear upon the wax, if you black the back-ſide.

Thus much of Graving *in* Copper, &c.

Concerning Engraving in Wood.

WHat ever is to be Cut, Carv'd or Graven in Wood, muſt be drawn, traced or paſted upon the VVood; and after that all that is vacant or to remain White muſt be Cut cleare out with little Narrow-pointed or points of Knives worne if the Mettall and temper be good will ſerve as well for that purpoſe.

This Cutting in Wood, is very tedious, difficult and curious, and for want of Incouragement much loſt to what repute once it had amongſt Famous Maſters.

The beſt Wood to cut upon are *Beech*, or *Box*, plain'd Inch thick or more according to what uſe they are apply'd.

To draw any Pattern, or Coppy upon Wood.

Grinde white very fine mix't with fair Watter, and then dip a Rag therein and Rub over that ſide of the Wood you intend to cut upon, and when it is through dry, it will preſerve the Ink, when you draw upon it that it ſhall neither ſpread nor ſink.

Having whited the Wood what you intend to cut either with black or Red colour the Back-part, and with a blunt Drawing point or Swallows quill trace over all the parts you intend to Imitate.

If you will reverſe what you are to do unleſs you draw the deſigne again the contrary way, you muſt paſte and ſpoyl your pattern.

And if you paſte it upon the Wood it muſt not be whited over; but being well plain'd, wipe over the puttern on the work-ſide with Gum *Tragacanth* diſſolv'd in fair Water, and lay it ſmooth upon the Wood, and when it is faſt on and dry throughly, then wet it a little all over, and fret off the Paper gently, till you ſee perfectly every ſtroke of the figure or deſigne; than dry it againe and ſo fall to work.

Thus of Cutting in VVood.

Of Painting.

HE that will Paint in Oyle muſt provide a good Stone, to grinde his Colours, *Porphry-ſtone* is beſt and will do the leaſt damage to the Colours, but in ſuch a want a *Slate*, or a very hard Stone may ſerve, that a Knife will not wear away.

Upon which Stone with what Colours you intend, puting *Lint-ſeed* Oyl to it grind it until there remain no fandineſs in the Colour.

A Pallat is the next materiall to lay your Colours upon, upon which they are alſo tempered; It is of an ovall forme, with a hole for your thumb.

Upon which lay your Colours in this order.

Next your thumb lay white-Lead, then next that lay *Vermillion*, *Eaſt-India*-Red-Lake, *Pink*-Yellow-*Oker*, or *Spruſe-Oker*, than *Umber*, *Flury*, &c.

Thus your Pallat is prepar'd except the Compounding of them, which to be done for a Face.

Take a little White-Lead, and as much Vermillion, and the like quantitie of Lake, and mix them altogether, and this will ſerve for the Darkeſt Carnation that is, in the Colour of the Face, and ſo conſequently at pleaſure more white will make it more pale, then having come to the Paleſt Colour, you muſt temper a little White, and Flury together, for a proper faint Shadow for the Face.

Your Colours prepar'd as aforeſaid, uſe them on the Face, as follows.

Firſt, take your lighteſt Colour, and lay in the lighteſt place of the Fore-head, and of the Noſe, and the leaſt part of the Cheek-bone, and next place your Carnation Colour.

And when you come to any place where a faint ſhadow is required, then as above-mentioned.

And for the Darkeſt ſhadows uſe *Eaſt-India*-Red, and Fullers-Earth, and ſometimes a little Pink amongſt it altogether, and note that theſe Colours above-mentioned are to expreſs a beautifull Face.

If you would make it a more Tawny complexion, put more

Eaſt-

East-India Red for the Carnation, and more Pink in the lights or heightnings.

The Pencils for your use are these two.

Swan-quills Pencils, one fige, one pointed. And for Goose-quill Pencils, two brissels, two figes, and one great brissel on a stick.

These Pencils are sufficient for any use.

Of Colours for Garments.

FOR light Blews, Indigo and white Lead mixt together.
For the darkest blew use all Indigo.
Use White only of it self for the light.
For Green, use Bise and Pinck mixt together.
Use Masticot for the Lights.
Pink and Umber for the Darks.
Reds must be made with *East-India* Red.
The Lights with Vermillion.
The Darkest with Earth of *Colen*.
For Whites, use white Lead only.
The Darks with Flour.
For Blacks, use Lamb-black.
The Lights, with Lamb-black and White mixt together.
Bone-black for the darkest.

These are the most usual Colours for Garments; but note, when all these Colours are dry, then they must be glazed, which is like washing of Prints with thin Colours, either mix them with oyle or varnish: your Blews must be glazed with *Smalt*, *Bise* or *Vltramorine*; your Reds with Lake, and your Yellows with Pink.

This will cause them to be exceeding beautiful.

Of Limning in Water-Colours.

TO Limn, prepare a fine ordinary siz'd Card, or very fine Paste-board, and polish it well with a Dogs Tooth, as small as possibly you can, on the side you intend to use.

Then take a Piece of Abortive Parchment of the same size with your Card or Paste-board, the which paste firm with clean fine starch; but before you use it, temper it first in your hand with a Knife, or your Finger, that it may be free from Knots, and then let it dry; then your Stone whereon you use to dry your Colours being made very clean, lay

the Card or Paſte-board thereon, the Parchment-ſide being downwards, then with a Tooth poliſh the backſide very hard; but note, that the outſide of the skin is beſt to Limn upon, and therefore muſt be outmoſt.

After this Preparation you muſt lay a Ground or Prime of fleſh Colour before you begin your work, and that muſt be tempered according to the Complexion of the face you are to draw; If the Complexion be fair, temper white Lake and Red-lead, but if a hard ſwarthy Complexion, then mingle with your white and red a little fine Maſticot, or *Engliſh* Oker, but obſerve that the Ground ſhould always be fairer then the Face you take, for it is an eaſie matter to darken a light colour, but difficult to make a ſad one lighter, for in Limning you muſt never heighten, but work them down to your juſt colour.

Your Ground being thus fitted, lay upon your piece of Paſte-board or Card, prepared with a bigger Pencil then ordinary, and lay ſmooth, even and free from Hairs of your Pencil, which that you may the better do, fill your Pencil full of colours, rather thin and wateriſh then thick and groſs; Then with two or three ſtrokes of your great Pencil lay on in an inſtant; for the ſooner it is laid on and nimbly, the evener it will lie.

Cover rather too much then too little for your primer; this done, take a ſhell, and before you begin to work, temper ſeveral little parcels of ſeveral ſhadows for the face, and diſpoſe them about the edge of your ſhell, that they may be ready for uſe.

Note that theſe Colours are fit for a face.

For the Red in the Cheeks, Lips, &c. Temper Lake, Red-Lead, and a little White together.

For faint blewiſh ſhadows temper Indigo and White.

For deeper ſhadows take White, *Engliſh* Oker, and a little Indigo, and for the dark and hard ſhadows uſe Lake and Pinck mixt with Umber, where note, that black muſt not be uſed in a face by any means.

Laſtly, When you have almoſt finiſh'd, do all the ſcars, moulds, ſmiling and glancing of the eye, deſcending and contracting of the Mouth, all which muſt be ſudden to expreſs a bold quick hand; Note farther, that the beſt light to draw by is the North-light, and the higher the Window and ſloping the better; place your ſelf ſo to your desk that the light may ſtrike in ſidelong, from the left hand to the right.

Thus much for Limning.

Of

Of Waſhing and Colouring; of Maps and Pictures; Diſcovering how to prepare them for Colours, with their Uſe, Order and Mixtures.

THAT Prints or Maps may lie ſmooth when paſted upon Paper or Cloth, firſt wet or damp your Prints with a Spunge or Cloth, but be careful that you wet them as the Paper will bear it; After you have ſo done, take your Paſte, made either of Wheat-flower or of ſtarch; and with a bruſh ſpread it all over the Paper or Cloth you intend to put it upon, then take the ſheet you damp'd, and lay it upon another part of the Board you paſte upon, and lay your Print upon the Paper or Cloth, and ſmooth it down with your hand; and ſo do by as many as your occaſion requires, and then either preſs them; or if you have not conveniencie take a ſheet or two of that Paper you paſted your Prints upon, and lay upon the Prints you paſted, but let the Paper be dry, then with your hands rub it all over hard, to cauſe your painted Prints to ſtick faſt every where; as you take them one from another, if you perceive any ſwelling or riſing of the Paper like bliſters, then take the point of a Pin or Needle, and prick the ſame, and that will let out the wind that lies underneath, and ſo cauſe it to lie ſmooth, if you rub it with your hands; and then hang them on lines to dry.

You may prepare them to make them bear Colours and Varniſh, but firſt obſerve how to paſte on Cloth, which is thus, wet your Maps or Prints you intend to paſte, as before you were to wet the Paper you were to paſte upon, and then let them lie, while you wet the Cloth or ſheet you intend to paſte upon, thus, put the Cloth into a pale of water, and be ſure it be throughly wet, and after wring it out, and nail it faſt at the top, bottom and ſides, ſo that it may be ſtrain'd ſmooth and even; this done, take your Print wet as beforeſaid, and with your bruſh paſte your ſheet you intend to place firſt or uppermoſt, and be ſure the paſte lie all over, and then place it upon your Cloth, and after take a Spunge with a little water in it, and ſo ſmooth and ſtrike it firme to the Cloth, thus do one after another until all are paſted.

To ſtrengthen your Print to bear Colours and Varniſh, there are three ways; either with ſize, or which is beſt of all with Paſte, or with ſtarch. If you uſe ſize, put ſome fair water to it, or it will ſoil much; when your ſtarch or paſte is boyl'd, uſe it until it be cool; for if it will not ſtrengthen your Print ſo much, being cold, with your Spunge be ſure you rub it all over with your Paſte, or elſe if you miſs, ſome parts will bear the Colours, and other parts will not. After it is once dry, go it over again a ſecond time with paſte, and then after it is through dry you need not fear to lay on your Colours,

How

How to choose your Pencils.

Be sure they be fullest next the Quill, falling off with a round sharp point; if there be any straggling Hairs, take them away by the touch of the flame of a Candle, you must have several Pencils for several Colours, or else be sure to wash your Pencil clean, when you take it from one colour to use it with another, or else you will endanger the spoil of all your Colours, you also must have of several sizes, as your Work requires.

To make Gum-Water.

Take a quart of clean water, and put it into a Bottle or earthen Pan, then take six Ounces of Gum Arabeck, and put it into a clean linnen Rag, and tie it up with a thread, put that in, let it dissolve in the water; if it prove too strong, put in more water; if too weak, put in more Gum.

The Names of such Colours that must be wash'd.

BLEWES.
Blew Bise.
Indigo.
Blew Verditer.
GREENS.
Verdigreece.
Sap Green.
Copper Green.
REDS.
Vermillion.
Lake.
Red-lead.
YELLOWS.
French-berries
Saffron.
Light Masticot.
Cambuga.
WHITES.
White-lead pickt fine.
BROWNS.
Spanish brown.
umber, or Hair-colour.
BLACKS.
Franck fort-black
Ivory burnt.
Small-coal black.
Sea-coal black.
Lamb-black.

All these must be very well ground before they can be used.

How to order your Colours.

Having very well ground those Colours to be ground; put them upon a Chalk-stone to dry, when they are dry, lay them up carefully until you use them, then mingle them with Gum-water

Those Colours that you must wash put into a Galley-pot and cover them with fair water, and stir them with a stick very well, and after they have stood a while, pour off that water into another Galley-pot; and let the second stand until it be setled, then pour the same water back again into the first pot, and stir it again as before, then pour it into the second pot, as before, and this do three or four times; and then at last when the colour is well setled in the second pot, throw the water quite away, and then use that colour that is in the second pot.

The colour in your first pot will serve for your course work.

Blew Bise well wash'd is best, but use no *Smalt* in washing your Prints.

A

A Lixivor to be used with some Colours.

Take an ounce of Pot-ashes of the best, and one Gallon of River-water, then brush your Ashes to powder, and put it into your water, and boil it a little while, then set it to settle, after pour off that which is clear, and keep that for your use.

For a sky Colour.

Let the upper part be the saddest blew, and the next lighter, and next that a flesh colour mix'd with some of the last and the lowest of all flesh colours, wrought with light yellow at your pleasure, and for the clouds your Judgment may direct, they being so various.

To make a Copper-Green.

Take an ounce of white Orgal, and four ounces of Copper-dust, to be had at the Copper-Smiths, and a pinte of fair Water, and boil it half away, then after it hath stood and setled, pour off the thinnest, and keep for your use, if you would have it a Sea-green, then put into it some blew *Verditor*, and if a Grass-Green, then put in some *French* Berry-water, or some *Cambuga*.

For a Red Crimson.

Take off your Liquor made with Pot-ashes, as before is mentioned, and adde to it some rain-water, and then take Scarlet-flocks or shreds, steep them with ordinary Gum-water; but note, you must let your Colours boil in the Liquor you steep them in a little while, and then put in your ordinary Gum-water, or weak size, and let them boil together until they are thick for your use.

For an Oringe Colour.

Take *Ornotto* and boil it in the aforesaid Liquor, and it will make a fair Oringe colour.

To make a good blew.

Take *Litmus* and wet it in the aforesaid liquour, let it stand all night, and then boil it in weak size or Gum-water, and if it be too sad, adde lime water to it, and if you would have it a fair purple adde White-wine vinegar to it.

To make a fair Crimson.

Take the best Brazil ground or shaved, put of the aforesaid Liquor to it, and let it stand all night, then boil it with weak size, or ordinary Gum-water, till the colour is to your minde: try it with a stick upon your Nail, when it fades put Powder of Allum into it to strike it lighter.

Colours

Colours that ſet off beſt together in Shadows

WHITE ſets off with all Colours.
GREEN ſets off with Red, Browns or Purples.
RED ſets off with Red, Brown, or Purple.
YELLOW ſets off with Purple, Red, Green or Brown.
BLEW ſets off with White, Red, Brown, Yellow or Black.
BROWN ſets off with Green or Yellow.

Colours that muſt be Ground.

Indigo
Lake
White-Lead
Spaniſh brown
Frankfort-black
Umber
Ivory burnt
Small Coal
Sea Coal
} These muſt be waſh'd after they are Ground

Colours that muſt be waſh'd.

Blew Bice
Red Lead
Sap Green.
Cambuga,

FINIS.

Robert